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ART UNIT	PAPER NUMBER
2168	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/664,189	THORPE, JONATHAN RICHARD	
	Examiner	Art Unit	
	Mahesh H. Dwivedi	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23 and 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/17/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Response to Amendment

2. Receipt of Applicant's Amendment, filed on 05/10/2007, is acknowledged. The amendment includes the cancellation of claims 24-26, the addition of claims 27-30, and the amending of claims 1-23.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 09/17/2003 has been received, entered into the record, and considered. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 101

4. The rejections raised in the office action mailed on 01/10/2007 have been overcome by applicants amendments received on 05/10/2007.

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 21 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The examiner specifically points to **"client system having logic"** as being directed towards nonstatutory subject matter.

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, function descriptive material per se.

Claim 23 is rejected for incorporating the deficiencies of independent claim 22.

Specification

7. The objections raised in the office action mailed on 01/10/2007 have been overcome by applicants amendments received on 05/10/2007.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 27 and 30 each recite "metadata". However, there is no mention of metadata anywhere in the specification.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 30 recites "feature vector". However, there is no mention of feature vector anywhere in the specification.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 18 recites the limitation "The portable data processing device comprising the client system according to claim 17" in page 07. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-4, 6, 8-17, 20-23, and 27-30 are rejected under 35 U.S.C. 102b) as being anticipated by **Kohonen et al.** (Article entitled "Self Organization of a massive document collection", dated May 2000).

12. Regarding claim 1, **Kohonen** teaches a system comprising:

A) a data network (Pages 581, and 583);

B) an information retrieval client system connected to said data network (Pages 582-584);

C) and one or more information item storage nodes connected to the data network (Page 582);

D) wherein: each storage node comprises a store configured to store a plurality of information items and an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network (Pages 581-584); and

E) said client system includes a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node (Pages 582-584, Figures 5-6).

The examiner notes that **Kohonen** teaches **"a data network"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581) and "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map). The examiner further notes that it is clear that **Kohonen's** method uses a remote retrieval to access external databases for mining and harvesting for the WEBSOM. The examiner further notes that **Kohonen** teaches **"an information retrieval client system connected to said data network"** as "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to

use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "The interface to the map has been provided with a form field into which the user can type a query, or a description of interest" (Page 584, Section E: Exploration of the Document Map). The examiner further notes that **Kohonen** teaches **"and one or more information item storage nodes connected to the data network"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map). The examiner further notes that **Kohonen** teaches **"wherein: each storage node comprises a store configured to store a plurality of information items and an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581) and "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search). The examiner further notes that **Kohonen** teaches **"said client system includes a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

Regarding claim 2, **Kohonen** further teaches a system comprising:
A) wherein said indexer at each storage node is operable to transmit data to said client system to said client system in batches (Pages 581,582-584, Figures 5-6);
B) each batch comprising at least data derived from some of those information items stored at that storage node for which data has not previously been transmitted to said client system (Pages 581,583-584, Figures 5-6).

The examiner notes that **Kohonen** teaches "**wherein said indexer at each storage node is operable to transmit data to said client system to said client system in batches**" as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581) and "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map). The examiner further notes that **Kohonen** teaches "**each batch comprising at least data derived from some of those information items stored at that storage node for which data has not previously been transmitted to said client system**" as "For the largest WEBSOM map made so far we selected a database of 6,840,568 patent abstracts available in electronic form and written in English" (Page 581, Section V: The Document Map of All Electronic Patent Abstracts). The examiner further notes that it is clear that Kohonen's method delivers new content that a particular user has never viewed before.

Regarding claim 3, **Kohonen** further teaches a system comprising:
A) wherein each batch of data comprises data derived from those information items stored at that storage node for which data has not previously been transmitted to said client system (Pages 581,583-584, Figures 5-6).

The examiner notes that **Kohonen** teaches "**wherein each batch of data comprises data derived from those information items stored at that storage node for which data has not previously been transmitted to said client system**" as "For the largest WEBSOM map made so far we selected a database of 6,840,568 patent abstracts available in electronic form and written in English" (Page 581, Section V: The Document Map of All Electronic Patent Abstracts). The examiner further notes that it is clear that Kohonen's method delivers new content that a particular user has never viewed before.

Regarding claim 4, **Kohonen** further teaches a system comprising:
A) wherein said indexer at each storage node is operable to transmit to said client system a batch of data derived from information items stored at that storage node in response to an information retrieval operation at said client system (Pages 582-584, Figures 5-6).

The examiner notes that **Kohonen** teaches **" wherein said indexer at each storage node is operable to transmit to said client system a batch of data derived from information items stored at that storage node in response to an information retrieval operation at said client system"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), "The interface to the map has been provided with a form field into which the user can type a query, or a description of interest" (Page 584, Section E: Exploration of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search). The examiner further notes that it is clear that **Kohonen's** method clearly must retrieve abstracts from the patent databases to the SGI computer after a user-input desiring to do so.

Regarding claim 6, **Kohonen** further teaches a system comprising:
A) wherein said data network is an internet network (Pages 582-584).

The examiner notes that **Kohonen** teaches **" wherein said data network is an internet network"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581) and "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map). The examiner further notes that it is clear that **Kohonen's** method uses a remote retrieval to access external databases for mining and harvesting for the WEBSOM. The examiner further notes that it is common knowledge that downloading from external databases is achieved via the internet.

Regarding claim 8, **Kohonen** further teaches a system comprising:
A) wherein said information items are at least partially textual (Page 581); and
B) said data derived form a stored information item comprises the whole of said textual content of that information item (Page 581).

The examiner notes that **Kohonen** teaches **"wherein said information items are at least partially textual"** as "From the raw patent abstracts we first extracted the titles and the texts for further processing" (Page 581, Section A: Preprocessing). The examiner further notes that **Kohonen** teaches **"said data derived form a stored information item comprises the whole of said textual content of that information item"** as "From the raw patent abstracts we first extracted the titles and the texts for further processing. We then removed nontextual information" (Page 581, Section A:

Preprocessing).

Regarding claim 9, **Kohonen** further teaches a system comprising:
A) wherein said data derived from a stored information item comprises textual data indicative of said content of the stored information item (Page 583, Figure 6).

The examiner notes that **Kohonen** teaches **"wherein said data derived from a stored information item comprises textual data indicative of said content of the stored information item"** as "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map). The examiner further notes that Figure 6 clearly shows that titles of the documents are shown to a user, in order to present an abstract of what that document is.

Regarding claim 10, **Kohonen** further teaches a system comprising:
A) wherein said client system comprises a graphical user interface for displaying a representation of at least some of said nodes as a two-dimensional display array of display points within a display area on. a user display (Pages 574, and 583, Figures 5-6).

The examiner notes that **Kohonen** teaches **"wherein said client system comprises a graphical user interface for displaying a representation of at least some of said nodes as a two-dimensional display array of display points within a display area on a user display"** as "documents are presented as points on a two-dimensional (2-D) plane and the geometric relations of the image points of the documents represent their similarity relations" (Page 574) and "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583).

Regarding claim 11, **Kohonen** further teaches a system comprising:
A) wherein said client system comprises: (i) a user control for defining a two-dimensional region of said display area (Pages 583-584, Figures 5-6); and
B) a detector for detecting those display points lying within said two-dimensional region of said display area (Pages 583-584, Figure 6).

The examiner notes that **Kohonen** teaches **"wherein said client system comprises: (i) a user control for defining a two-dimensional region of said display area"** as "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583) and "keyword search" (Page 584). The examiner further notes that Figure 6 describes an interface which displays retrieved search results based on the search constraint. The examiner further notes that **Kohonen** teaches **"a detector for detecting those display points "lying within said two-dimensional region of said display area"** as "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the

map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583) and "An example of performing a keyword search is depicted in Fig. 6" (Page 584, Section: Keyword Search). The examiner further notes that it is clear that Figure 6 of Kohonen displays a search results from a user query by depicting a 2-d grid.

Regarding claim 12, **Kohonen** further teaches a system comprising:
A) wherein said graphical user interface is operable to display a list of data representing information items, being those information items mapped onto nodes corresponding to display points displayed within said two-dimensional region of said display area (Pages 583-584, Figures 5-6).

The examiner notes that **Kohonen** teaches "**wherein said graphical user interface is operable to display a list of data representing information items, being those information items mapped onto nodes corresponding to display points displayed within said two-dimensional region of said display area"** as "This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map) and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map). The examiner further notes that Figure 5 clearly shows an interface With nodes mapping different documents.

Regarding claim 13, **Kohonen** further teaches a system comprising:
A) wherein said client system comprises a user control for choosing one or more information items from said list (Pages 583-584, Figures 5-6); and
B) said graphical user interface being operable to alter manner of display within said display area of display points corresponding to selected information items (Pages 583-584, Figures 5-6)

The examiner notes that **Kohonen** teaches "**wherein said client system comprises a user control for choosing one or more information items from said list"** as "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583), "This time includes finding the keywords to label the map, forming the WWW- pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map). The examiner notes that **Kohonen** teaches **"said graphical user interface being operable to alter manner of display within said display area of display points corresponding to selected information items"** as "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are

used in exploring the map, and indexing the map units for keyword searches" (Page 583), "This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map). The examiner further notes that Figure 6 clearly shows the ability to alter the interface by zooming in (see "Click any area on the map to get a zoomed view!").

Regarding claim 14, **Kohonen** further teaches a system comprising:
A) wherein said data derived from an information item includes an identification of said storage location of that information item (Pages 574 and 583, Figures 5-6).

The examiner notes that **Kohonen** teaches **"wherein said data derived from an information item includes an identification of said storage location of that information item"** as "This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map) and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map).

Regarding claim 15, **Kohonen** further teaches a system comprising:
A) wherein said identification comprises a universal resource indicator (URI) (Pages 574 and 583, Figures 5-6).

The examiner notes that **Kohonen** teaches **"wherein said identification comprises a universal resource indicator (URI)"** as "This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map) and "When clicking a point on the map display with a mouse, links to the document database enable reading the contents of the documents" (Page 583, Section E: Exploration of the Document Map).

Regarding claim 16, **Kohonen** teaches an information storage node comprising:
(A) said storage node being connected via a data network to an information retrieval client system (Pages 581 and 583);
(B) including a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said storage node (Pages 581-584, Figures 5-6);
(C) the storage node comprising: (i) a store configured to store a plurality of information items and an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network (Pages 582-584).

The examiner notes that **Kohonen** teaches **"said storage node being connected via a data network to an information retrieval client system"** as "For the

largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581) and "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map). The examiner further notes that it is clear that **Kohonen's** method uses a remote retrieval to access external databases for mining and harvesting for the WEBSOM. The examiner further notes that **Kohonen** teaches "**including a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said storage node**" "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).. The examiner further notes that **Kohonen** teaches **"the storage node comprising: (i) a store configured to store a plurality of information items and an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581) and "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

Regarding claim 17, **Kohonen** teaches an information retrieval client system comprising:
A) said client system being connectable via a data network to one or more information item storage nodes each comprising a store for storing a plurality of information items

and an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network (Pages 581-584).
B) the client system comprising a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node (Pages 582-584, Figures 5-6).

The examiner notes that **Kohonen** teaches **"said client system being connectable via a data network to one or more information item storage nodes each comprising a store for storing a plurality of information items and an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "The interface to the map has been provided with a form field into which the user can type a query, or a description of interest" (Page 584, Section E: Exploration of the Document Map). The examiner further notes that **Kohonen** teaches **"the client system comprising a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

Regarding claim 20, **Kohonen** teaches a information retrieval method comprising:
(A) one or more information item storage nodes connected to said data network (Pages 581-582);
B) storing a plurality of information items (Page 581);
C) transmitting data by each storage node derived from information items stored at that storage node to said client system via said data network (Pages 581-584, Figures 5-6); and
D) generating a node position in respect of each information item represented by said received data by said client system responsive to data received from an indexer of a storage node (Pages 581-584, Figures 5-6).

The examiner further notes that **Kohonen** teaches **"one or more information item storage nodes connected to said data network"** as "For the largest WEBSOM map made so far we selected a database of 6,840,568 patent abstracts available in electronic form and written in English" (Page 581, Section V: The Document Map of All Electronic Patent Abstracts) and "From the raw patent abstracts we extracted the titles and the texts for further processing" (Page 581, Section A: Preprocessing) and "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map). The examiner further notes that **Kohonen** teaches **"said method comprising the steps of: (i) each storage node storing a plurality of information items"** as "For the largest WEBSOM map made so far we selected a database of 6,840,568 patent abstracts available in electronic form and written in English" (Page 581, Section V: The Document Map of All Electronic Patent Abstracts) and "From the raw patent abstracts we extracted the titles and the texts for further processing" (Page 581, Section A: Preprocessing). The examiner further notes that **Kohonen teaches "transmitting data by each storage node derived from information items stored at that storage node to said client system via said data network"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The

document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "The interface to the map has been provided with a form field into which the user can type a query, or a description of interest" (Page 584, Section E: Exploration of the Document Map). The examiner further notes that **Kohonen** teaches **"generating a node position in respect of each information item represented by said received data by said client system responsive to data received from an indexer of a storage node"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map), "This time includes finding the keywords to label the map, forming the WWW-ages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583, Section C: Formation of the Document Map), and "Given a search description, the matching units are found from the index and the best matches are returned and displayed as circles on the map" (Page 584, Section 2: Keyword Search).

Regarding claim 21, **Kohonen** teaches a method comprising:
(A) said storage node being connectable via a data network to an information retrieval client system having logic, responsive to data received from the storage node, for generating a node position in respect of each information item represented by the received data (Pages 581-584, Figures 5-6);
B) said method comprising the steps of: storing a plurality of information items (Page 581); and
C) transmitting data derived from information items stored at that storage node to the client system via the data network (Pages 581-584, Figures 5-6).

The examiner further notes that **Kohonen** teaches **"said storage node being connectable via a data network to an information retrieval client system having logic, responsive to data received from the storage node, for generating a node position in respect of each information item represented by the received data"** as "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of

main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "The interface to the map has been provided with a form field into which the user can type a query, or a description of interest" (Page 584, Section E: Exploration of the Document Map).. The examiner further notes that **Kohonen** teaches **"said method comprising the steps of: storing a plurality of information items"** as "For the largest WEBSOM map made so far we selected a database of 6,840,568 patent abstracts available in electronic form and written in English" (Page 581, Section V: The Document Map of All Electronic Patent Abstracts) and "From the raw patent abstracts we extracted the titles and the texts for further processing" (Page 581, Section A: Preprocessing). The examiner further notes that **Kohonen** teaches **"transmitting data derived from information items stored at that storage node to the client system via the data network"** as "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "The interface to the map has been provided with a form field into which the user can type a query, or a description of interest" (Page 584, Section E: Exploration of the Document Map).

Regarding claim 22, **Kohonen** teaches a method comprising:
(A) said client system being connectable via a data network to one or more information item storage nodes each comprising a store for storing a plurality of information items and an indexer for transmitting data derived from information items stored at that storage node to said client system via said data network (Pages 581-584, Figures 5-6);
(B) said method comprising: generating a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node (Pages 581-584, Figures 5-6).

The examiner further notes that **Kohonen** teaches **"said client system being connectable via a data network to one or more information item storage nodes each comprising a store for storing a plurality of information items and an indexer for transmitting data derived from information items stored at that storage node to Said client system via said data network"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First

Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "The interface to the map has been provided with a form field into which the user can type a query, or a description of interest" (Page 584, Section E: Exploration of the Document Map). The examiner further notes that **Kohonen** teaches **"said method comprising: generating a node position in respect of each information item represented by said received data responsive to data received from said indexer of a storage node"** as "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "The interface to the map has been provided with a form field into which the user can type a query, or a description of interest" (Page 584, Section E: Exploration of the Document Map).

Regarding claim 23, **Kohonen** further teaches a method comprising:
A) A computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform according to any one of claims 20 to 22 (Page 582).

The examiner notes that **Kohonen** teaches **"Computer software comprising program code for carrying out a method according to any one of claims 20 to 22"** as "With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582, Section C: Formation of the Document Map).

Regarding claim 27, **Kohonen** further teaches a method comprising:
A) wherein the data is metadata derived from the information item (Page 574).

The examiner notes that **Kohonen** teaches **"wherein the data is metadata derived from the information item"** as "Any of the basic projection methods also can be used to organize textual data items, such as documents, if their contents are described statistically as some kind of metric feature vectors. For instance, if the collection of words used in a document is described as a histogram, the latter can serve as the input feature vector on the basis of which the document collection can be organized" (Page 574).

Regarding claim 28, **Kohonen** further teaches a medium comprising:
A) wherein the data is the information item with all the stop words removed (Page 581).

The examiner notes that **Kohonen** teaches **"wherein the data is the information item with all the stop words removed"** as " The words occurring less than 50 times in the whole corpus, as well as a set of common words in a stopword list of 1335 words were removed. The remaining vocabulary consisted of 43 222 words. Finally, we omitted the 122 524 abstracts in which less than five words remained" (Page 581).

Regarding claim 29, **Kohonen** further teaches a method comprising:
A) wherein the data is a list of all stem words included in the information item (Page 581).

The examiner notes that **Kohonen** teaches **"wherein the data is a list of all stem words included in the information item"** as " All words were converted to their base form using a stemmer" (Page 581).

Regarding claim 30, **Kohonen** further teaches a method comprising:
A) wherein the data is a feature vector derived from the metadata (Page 574).

The examiner notes that **Kohonen** teaches **"wherein the data is a feature vector derived from the metadata"** as "Any of the basic projection methods also can be used to organize textual data items, such as documents, if their contents are described statistically as some kind of metric feature vectors. For instance, if the collection of words used in a document is described as a histogram, the latter can serve as the input feature vector on the basis of which the document collection can be organized" (Page 574).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner wherein the invention was made.

14. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kohonen et al.** (Article entitled "Self Organization of a Massive Document Collection") as applied to claims 1-4, 6, 8-17, 20-23, and 27-30 and in view of **Hamilton et al.** (U.S. Patent 6,874,019)

15. Regarding claim 5, **Kohonen** does not explicitly teach a system comprising:
A) wherein said indexer at each storage node is operable to detect an information item which is modified or newly stored at that storage node; and
B) in response to such a detection, to send a batch of data derived from that information item to said client system.

Hamilton, however, teaches "**wherein said indexer at each storage node is operable to detect an information item which is modified or newly stored at that storage node**" as "The invention then parses the current pages source, such as the HTML of the current page, and begins downloading of all web pages directly linked to the current page" (Column 7, lines 45-48)" and **"in response to such a detection, to send a batch of data derived from that information item to said client system"** as "As one-hop [ages are discovered to contain the user's interest terms, they are then brought to the user's attention by any one of several methods" (Column 8, lines 27-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Hamilton's** would have allowed **Kohonen's** to provide a method predictably retrieve information pertinent to a known user's interest, as noted by **Hamilton** (Column 3, lines 49-52).

Regarding claim 7, **Kohonen** does not explicitly teach a system comprising:
A) wherein one or more of said storage nodes are internet search servers.

Hamilton, however, teaches **"wherein one or more of said storage nodes are internet search servers"** as "A metasearch engine does not keep its own index, but rather submits a query to multiple search engines simultaneously" (Column 2, lines 46-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Hamilton's** would have allowed **Kohonen's** to provide a method predictably retrieve information pertinent to a known user's interest, as noted by **Hamilton** (Column 3, lines 49-52).

16. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kohonen et al.** (Article entitled "Self Organization of a Massive Document Collection") as applied to claims 1-4, 6, 8-17, 20-23, and 27-30 and in view of **Derthick** (Article entitled

"Interfaces for Palmtop Image Search").

17. Regarding claim 18, **Kohonen** does not explicitly teach an information retrieval client system comprising:

A) The portable data processing device comprising the client system according to claim 17.

Derthick, however, teaches "**The portable data processing device comprising the client system according to claim 17**" as "palmtop interfaces" (Page 1,Section 2, Figure 1) and "video retrieval, our current interfaces segment video into shots, and represent them with Single frames" (Page 1 ,Section 1, Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Derthick's** would have allowed **Kohonen's** to provide a method for having an efficient multiple image/multimedia retrieval based on RSVP premises, as noted by **Derthick** (Abstract).

Regarding claim 19, **Kohonen** does not explicitly teach an information retrieval client system comprising:

A) A video acquisition and/or processing apparatus comprising the client system according to claim 17.

Derthick, however, teaches **"A video acquisition and/or processing apparatus comprising the client system according to claim 17"** as "video retrieval, our current interfaces segment video into shots; and represent them with single frames" (Page 1 ,Section 1, Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Derthick's** would have allowed **Kohonen's** to provide a method for having an efficient multiple image/multimedia retrieval based on RSVP premises, as noted by **Derthick** (Abstract).

Response to Arguments

18. Applicant's arguments filed on 05/10/2007 have been fully considered but they are not persuasive.

Applicant argues on page 11, that **"With regard to the rejection of claims 20-22 under 35 U.S.C. 101...are also in compliance with all requirements under 35 U.S.C. 101"**. However, the examiner wishes to state that independent claim 21 recites "logic". As explained in the instant office action, "logic" is non-statutory subject matter, and as a result, claim 21 is not in compliance with the requirements of 35 U.S.C. 101.

Applicant argues on page 12, that **"A technical advantage of this is to reduce network traffic needed between the storage node and the client system, and to reduce the processing overhead at the client system. Note that neither of these advantages is even relevant in a single-system arrangement. It is respectfully submitted that Kohonen simply does not describe this split arrangement"**. However, the examiner wishes to point to pages 581-584 of **Kohonen** which state "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted

by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583). The examiner further wishes to state that the storage node is taught by the originating patent database of **Kohonen** (See U.S. Patent and Japan databases), and the client side is taught by the SGI computer. Moreover, the fact that the interface is developed on the SGI computer (see "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583)) for user access, clearly shows that the SGI computer generates the semantic map and node positions from the storage node (Patent databases).

Applicant argues on page 12, that **"The computer was apparently cited as "one or more information storage nodes" by the outstanding office action. However, it is not clear what is being cited as "a data network" or "an information retrieval system connected to said network". In fact, it is respectfully submitted that Kohonen describes a single system (the six processor SGI machine) for carrying out the whole process to generate node positions, and thus does not teach a "data network" or "an information retrieval client system connected to said data network""**. However, the examiner wishes to point to pages 581-584 of **Kohonen** which state "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm

and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583). The examiner further wishes to state that the storage node is taught by the originating patent database of **Kohonen** (See U.S. Patent and Japan databases), and the client side (information retrieval system) is taught by the SGI computer. Moreover, the examiner wishes to state that it is common knowledge that a data network must be used to download/harvest content from a database.

Applicant argues on page 13, that **"The fact that the user may look at the HTML pages via a networked browser does not mean that the user's browser is acting as a client system as recited in Claim 1, because a client system as defined in Claim 1 includes a node generator"**. However, the examiner wishes to point to pages 581-584 of **Kohonen** which state "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583). The examiner further wishes to state that the storage node is taught by the originating patent database of **Kohonen** (See U.S. Patent and Japan databases), and the client side (information retrieval system) is taught by the SGI computer. Moreover, the examiner

wishes to state that the SGI computer is clearly generating the node positions from the storage nodes (Patent databases).

Applicant argues on pages 13-14, that **"this does not describe that the database is stored by the SGI machine. Rather, it is just working memory for the map generation process. Even assuming arguendo that the database had been stored by the SGI machine in its main memory, that still does not teach the split of tasks between a networked storage node and client systems as defined in Claim 1"**. However, the examiner wishes to point to pages 581-584 of **Kohonen** which state "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583). The examiner further wishes to state that the storage node is taught by the originating patent database of **Kohonen** (See U.S. Patent and Japan databases), and the client side is taught by the SGI computer. Moreover, the examiner wishes to state that it is common knowledge that a data network must be used to download/harvest content from a database. Furthermore, the examiner wishes to state that it is clear that the storage node (Patent databases) transmit the information to the information client retrieval system (SGI computer). The examiner further wishes to state that it is clear that both systems perform operations on the development of the map, and as a result, perform split operations.

Applicant argues on page 14, that **"it is not clear what is being cited as "an indexer for transmitting data derived from information items stored at the storage node to said client system via said data network"**. However, the examiner wishes to point to pages 581-584 of **Kohonen** which state "For the largest WEBSOM map made so far we selected a data base of 6 840 568 patent abstracts available in electronic form and written in English. These patents were granted by the U.S., European, and Japanese patent offices and stored in two databases: the "First Page" database (1970–

1997) and "Patent Abstracts of Japan" (1976–1997). The average length of each text was 132 words. The size of the SOM was 1 002 240 models (neurons)" (Page 581), "The final map was constructed in four successively enlarged stages, at all of which the same 500-dimensional document vectors were used as input. The map was increased twice sixteenfold and once ninefold. The smallest, 435-unit map was constructed using the original SOM algorithm and 300 000 learning steps. Each of the enlarged, estimated maps (cf. Section IV-B) was then fine-tuned by five batch map iteration cycles. In order that the asymptotic form of the map would be smooth and regular enough, we had to use the final neighborhood size where the radius was nine grid spacing...With the newest versions of our programs the whole process of computation of the document map takes about six weeks on a six-processor SGI 02000 computer...The amount of main memory required was about 800 MB" (Page 582), "The document map is presented to the user as a series of HTML pages that enable the exploration of the map" (Page 583, Section E: Exploration of the Document Map), and "Forming the user interface automatically took an additional week of computation. This time includes finding the keywords to label the map, forming the WWW-pages that are used in exploring the map, and indexing the map units for keyword searches" (Page 583). The examiner further wishes to state that the storage node is taught by the originating patent database of **Kohonen** (See U.S. Patent and Japan databases), and the client side is taught by the SGI computer. Moreover, the examiner wishes to state that it is common knowledge that a data network must be used to download/harvest content from a database. Furthermore, the examiner wishes to state that it is clear that the storage node (Patent databases) transmit the information to the information client retrieval system (SGI computer).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,636,862 issued to **Lundahl et al.** on 21 October 2003. The subject matter disclosed therein is pertinent to that of claims 1-23, and 27-30 (e.g., methods to use SOM mapping).

U.S. PGPUB 2003/0208485 issued to **Castellanos** on 06 November 2003. The subject matter disclosed therein is pertinent to that of claims 1-23, and 27-30 (e.g., methods to use SOM mapping).

U.S. Patent 7,017,186 issued to **Day** on 21 March 2006. The subject matter disclosed therein is pertinent to that of claims 1-23, and 27-30 (e.g., methods to use SOM mapping).

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahesh Dwivedi whose telephone number is (571) 272-2731. The examiner can normally be reached on Monday to Friday 8:20 am – 4:40 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached (571) 272-3642. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mahesh Dwivedi
Patent Examiner
Art Unit 2168

MHD

August 03, 2007

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